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An Experiment
Of making Cherry-Trees, that have withered
fruit, to bear full and good fruit; and of
Recovering the almost withered fruit.

Communicated by the same, as follows :

A Nno 1665, I made the following Experiment with 3 *May-Cherry-Trees* (planted in a rich Mould) which lay to a South-wall, shaded 4 Winter-Moneths from the Sun by a high Building, so that the Sun came not on them, till the beginning of *March*, when being high, and shining somewhat fiercely upon them, the fruit constantly withered for some years before. Now this year, the season being very hot and dry, I bared the roots of *one* of them, by making a hole about it, and watered it every Morning and Evening with about a *Gallon* of water, for about a fortnight before the Cherries came to redness, and the fruit was full and good. The other *two* Trees, left without this ordering, had most of their fruit withered, having onely skin and stones. Now to try this Experiment farther, I made a hole round about *one* of the other Trees, and fed it with water daily, as the former: In a *Weeks* time, those that were quite withered, fell off, and the rest, that were not so, grew and increased exceedingly; the *other* Tree, that was not used after this manner, had not any of its fruit come to perfection.

An Experiment
On Aloe Americana Serrati-folia weighed;
seeming to import a Circulation of the Sappe
in Plants, by the same Dr. Merret.

A ugust 4. 1656. this *Aloes* weighed 21 *Ounces*, 6 *Drams*, 2 *Grains*. Its colour was of a pale-green, consisting of 11 *Leaves*; it was bound about with a red dry Cloth, and was hung up without Oil, as is usual, in the Kitchen.

August

Weight.										Loss.	
Ounc. Drams. Scrup. Grains.										Scruples. Grains.	
August	19.	21	3	0	24	3	27				
Septemb.	6.	21	1½	0	0	1	14				
February	20.	21	1	0	12	0	11				
March	16.	21	0	2	0	0	32				
April	8.	21	0	0	0	0	40				
May	1.	20	7	0	0	1	0				
May	28.	20	5½	0	0	1½	0				
June	12.	20	4	0	4	2	26				
July	1.	20	1	0	8	2	18				
July	20.	19	6	0	1	3	7				
August	4.	19	3	0	12	2	49				

So that in a whole year it lost 2 Ounces, 3 Drums, 24 Grains. The succeeding year being drier and hotter, it lost 3 Ounces, 2 $\frac{1}{2}$ Scruples, and more than double in the 6 colder, than the 6 hotter Months. I kept it about 5 years, and it decreased much about the same proportion. And in the year 1660, hanging it in a colder Garret, it perished.

These Observables I had about it, that every Year two of the greater Leaves first changed Colour, and wither'd; and in the Spring-time, there grew out two very fresh and green ones, never amounting to the bignes of any of the precedent; insomuch, that all this time I had the same number of Leaves. And then, these new Leaves were more fresh and green, and not serrated, and thicker also in proportion to their other Dimensions. Whence perhaps it may probably be inferr'd, *vid.* from the growth of these latter Leaves, that there is a *Circulation* in this Plant of the *Succus nutritius*. For, how is it possible, that the Roots, continuing as firm and solid as at first, should supply so much nourishment, as to procreate new Leaves, unless it were from the return of the said *Succus*, from the old and decaying Leaves, into the Root, and there protruded for the production of new ones? For, all *Bulbous* Roots, as Garlick, Onions, Tulips, and especially Squils, who protrude their Leaves, placed in a Shop or House, have their Roots lighter, and more spongy; the

the Leaves being formed out of the substance of the Root, as a Chick out of the *Albumen*; in the mean while the whole decreasing in weight, as in the aforesaid *Aloe*; as 'tis manifest by many Experiments made by me.

An Extract
Of a Letter, written by Mr. Richard Towne-
ley to Dr. Croon, touching the Invention
of Dividing a Foot into many thousand
parts, for Mathematical purposes.

Finding in one * of the last *Philosophical Transactions*, how much M. *Auzout* esteems his In- * Vid. Numb. 21. P. 373.
vention of dividing a Foot into near 30000 parts, and taking thereby Angles to a very great exactness; I am told, I shall be look't upon as a great Wronger of our Nation, should I not let the World know, that I have, out of some scatter'd Papers and Letters; that formerly came to my hands of a Gentleman of these Parts, one Mr. *Gascoigne*, found out, That before our late Civil Wars, he had not only devised an Instrument of as great a power, as M. *Auzout's*, but had also for some Years made use of it, not only for taking the Diameters of the Planets, and Distances upon Land; but had farther endeavour'd, out of its preciseness, to gather many Certainties in the Heavens; amongst which, I shall only mention one, *viz.* The finding the *Moons Distance*, from two Observations, of her *Horizontal* and *Meridional Diameters*: Which I the rather mention, because the *French Astronomer* esteems himself the first that took any such Notice, as thereby to settle the *Moons Parallax*. For, our Countrey-man fully consider'd it before, and imparted it to an Acquaintance of his, who thereupon propos'd to him the Difficulties that would arise in the Calculation; with considerations upon the strange Niceties, necessary to give him a certainty of what he desired. The very Instrument he first made I have now by me, and two others more perfected by him; which doubtless he would have infinitely mended, had he not been slain unfortunately in His late Majesties Service. He had a *Treatise*